

the tufted primary backing and the additional backing without such damage, to form an intermediate structure having binder disposed between the stitched side of the tufted primary backing and the additional backing;

B⁵ heating the tufted primary backing or the intermediate structure after application of the stitch bind composition to remove the aqueous liquid component without damaging the tufted primary or additional backing;

heating the binder to soften or melt the thermoplastic resin without damaging the tufted backing or the additional backing; and

cooling the intermediate structure with the thermoplastic resin in softened or melted form to solidify the resin.

B⁶ 38. (Amended) The process of claim 25 wherein the stitch bind composition has a viscosity of about 1.5 to 400 cps.

B⁷ 44. (Amended) The process of claim 43 wherein the viscosity of the stitch bind composition is about 1.5 to 400 cps.

REMARKS

At the outset, Applicants note with appreciation that the anticipation and obviousness rejections according to the prior Office Action based on US 4,808,459 (Smith) as the sole or primary reference have not been repeated and have been considered moot in the outstanding action.

Claims 1, 24, 25 and 27 have been amended to recite that the stitch bind composition comprises an aqueous liquid component and has a viscosity effective for coating or penetrating the stitches to contact the filaments thereof ranging from about 0.5 to 3000 cps, to refer to bonding of the organic polymer component on heating to remove the aqueous liquid component and to refer to heating the stitch bind composition or tufted backing or intermediate structure, as applicable, to remove the aqueous liquid component. Claim 26 has been amended to recite that the stitch bind composition comprises water and the recited organic polymer component and to refer to water elsewhere as appropriate and otherwise as in claims 1, 24, 25 and 27. Support for the amendments with respect to an aqueous liquid component and water is found in claim 5 as filed, reciting that the liquid component of the stitch bind composition comprises an aqueous liquid component, and in the detailed discussion of liquid components at page 29 lines 17-34 of the specification.

Support for the amendment with respect to viscosity of the stitch bind composition being effective to coat or penetrate stitches and contact filaments appears at page 24 line 37 to page 25 line 3 of the specification.

Claims 4, 13, 38 and 44 have been amended to delete the term "about" in reference to the stitch bind composition upper viscosities recited therein.

Claim 5 has been amended to recite that the softened or melted thermoplastic resin applied into contact with the stitched side of the tufted primary backing has flow properties corresponding to an MI of 1 to 200 g/ 10 min. This is supported in the discussion of flow properties of thermoplastic resins of the thermoplastic binders in the paragraph bridging pages 56-57 and in particular page 57 lines 6-11.

In view of the above, the amended claims do not constitute new matter.

The restriction requirement and rejections in the outstanding action are discussed below using headings corresponding to those in the action.

Election/Restrictions

In response to the restriction requirement, made final according to the outstanding action, claims 28-33 have been canceled.

Claim Rejections – 35 USC 112

Claims 1-27 and 34-45 have been rejected as unpatentable under 35 USC 112, second paragraph, based on an asserted lack of clarity of claims 1 and 23-27 as to when the thermoplastic binder is applied, and of claims 1, 3, 4, 13, 23-27, 38, 41 and 41 for use of the term "about." Reconsideration of the rejection is requested for reasons discussed below.

With regard to application of the thermoplastic binder according to claims 1 and 23-27, the claims have been carefully drafted to make clear that application of thermoplastic binder can occur either before or after application of the stitch bind composition. In some embodiments of the invention, as when the binder is a component of or integrated into the tufted primary backing structure, such as by tufting a primary backing having a binder in the form of a coating of thermoplastic resin or to which is affixed a binder in the form of a nonwoven web or fibers of thermoplastic resin, the binder is applied before the stitch bind composition. In other embodiments, such as when the

binder is extruded into contact with the stitched side of the tufted backing with applied stitch bind composition or by feeding an additional backing with an affixed or integrated binder into contact with the tufted backing with applied stitch bind composition, or feeding binder in solid form, such as fabric, film, fiber or powder, into contact with the tufted backing with applied stitch bind composition, application of the binder occurs after application of the stitch bind composition. It also is contemplated that binder can be applied both before and after application of the stitch bind composition, as when stitch bind composition is applied to a tufted primary backing with an integrated or affixed binder and an additional backing with integrated or affixed binder is brought into contact with the tufted primary backing with applied stitch bind composition. These and other variations are described in the specification and the Examiner's attention is directed in particular to page 38 line 13 to page 40 line 14 for a detailed description of various embodiments.

In view of the foregoing, the fact that the claims do not specify when the binder is applied in relation to when the stitch bind composition is applied is not a matter of lack of clarity or failure to particularly point out and distinctly claim the invention. To the contrary, it reflects the claims' clarity in embracing various embodiments of the invention. In that regard, it also is submitted that the Examiner's own questions whether binder is applied before or after the stitch bind composition reflect an understanding that both are contemplated and are indicative of the claims' clarity in that regard.

In response to the position set forth in the outstanding action that the word "about" in claims 1, 3, 4, 13, 23-27, 38, 41 and 44 makes the claims unclear because it is not defined in the claims and a standard therefor is not described in the specification, it is submitted that functional standards for both viscosity of the stitch bind composition and amounts of organic polymer or residue thereof appear in the claims with the amendment to claims 1 and 24-27 reciting that the viscosity of the stitch bind composition is effective for coating or penetrating the stitches to contact the filaments thereof and the existing claim language reciting that the organic polymer component of the stitch bind composition is capable of bonding filaments of the stitches on removal of the liquid component. Taken together with deletion of the term "about" in regard to the upper viscosity levels recited in claims 1, 4, 13, 24-27,

38 and 44, and with the descriptions of broad and preferred viscosity ranges at page 25 lines 4-10 of the specification ("preferably . . . about 0.5 to about 3000 centipoises . . . [m]ore preferably about 1 to about 1200 centipoises, with about 1.5 to about 400 centipoises being most preferred") the viscosities recited in the claims and latitude admitted by the remaining occurrences of the word "about" are clear to persons skilled in the art. Similarly, taken together, the claims' recitation with respect to organic polymer or its residue being capable of bonding filaments of stitches and the description of amounts thereof at page 31 line 35 to page 32 line 6 ("Preferred amounts . . . are about 0.2 to about 3 osy, with about 0.3 to about 1.5 osy being preferred for typical velvet and plush carpet styles . . . and about 0.5 to about 2 osy preferred for heavier yarns and . . .") provide both functional guidance in the claim and an indication of latitude in the term "about."

In view of the above, it is submitted that claims 1-27 and 34-45 clearly and concisely define the claimed invention and the 35 USC 112, second paragraph, rejection of those claims is not warranted.

Claim Rejections – 35 USC 103

Claims 1-5, 13-19, 21-27, 34, 38, 41 and 44 have been rejected as unpatentable over US 3,684,600 (Smedberg) in view of alleged admitted prior art under 35 USC 103. Reconsideration is requested.

Smedberg discloses carpet lamination using hot melt backsizing adhesives in which a lower viscosity hot melt or other adhesive is used in conjunction with the hot melt backsize. The hot melt backsize adhesive is described as having Brookfield viscosity of about 5,000 to 50,000 and is applied by passing the stitched side of a tufted backing through a bath of melted adhesive with a doctor blade being used to control the amount of adhesive that is applied. The precoat adhesive is described as having viscosity of 2-2,000 cps and is applied with an applicator roll. Hot melt precoat adhesives are preferred by Smedberg although adhesives other than hot melts are also mentioned.

Smedberg is not directed to lamination of carpets using thermoplastic binders, as in Applicants' claims. Unlike the thermoplastic resins used as binders according to the claims, Smedberg's backsize adhesives are hot melt

adhesives. As well known to persons skilled in the art, viscosities of hot melt adhesives are well below those of the thermoplastic resins of the claimed thermoplastic binders, and hot melt adhesives generally have inadequate melt strengths for extrusion or processing into solid forms which themselves could be used as binders. In this regard, attention is directed to the Bieser reference applied in other rejections of Applicants' claims in the outstanding action. At page 5 lines 9-28, Bieser specifically discusses unsuitability and disadvantages of hot melt adhesives for carpet lamination, including not only complexities of formulation, poor tuft lock and melt strengths too low for application other than with heated doctor blades and rotating melt transfer rollers.

These distinctions from Smedberg are reflected in independent claims 1 and 24-27, all of which recite that the thermoplastic binder is applied into contact with the stitched side of a tufted backing by extrusion of the binder into contact with the same or contacting with the binder in solid form. Smedberg fails to disclose either method of contacting his hot melt backsize adhesive with a tufted backing. Contrary to the assertion at page 5 of the outstanding action that the reference discloses application of hot melt adhesive by extrusion, only application with a dip bath/applicator roll/ doctor blade system is disclosed. [The 5,000-50,000 viscosities required for Smedberg's hot melt adhesives would be understood by persons skilled in the art as too low for application by extrusion.] In this regard, the waxes and low melting components of hot melt adhesive formulations, such as disclosed at Col. 7 l. 4-27 of the reference, would also be understood to provide formulations with inadequate melt strength for extrusion. Application of hot melt adhesive into contact with a tufted binder with the adhesive in solid form is even further removed from the description of Smedberg. Claim 5 further emphasizes the distinction between Smedberg's hot melt adhesive backsizes and Applicants' thermoplastic binder, [reciting that the thermoplastic resin of the binder has melt flow properties corresponding to an MI of 1 to 200 g./ 10 min.]

Applicant's claims further distinguish over Smedberg because the stitch bind composition according to the claims includes an aqueous liquid component that can be removed by heating at a temperature low enough to

avoid damage to components of the tufted backing to which it is applied. Smedberg notes that precoat adhesives other than hot melts can be used and may contain diluents or carriers (Col. 4 l. 6-9); however, Smedberg itself discounts precoats in such form with its express emphasis that use of hot melt adhesive backsizes eliminates need for drying ovens in carpet manufacture (Col. 1 l. 55-62).

Smedberg's examples also are contrary to use of precoat adhesives in the form of aqueous liquid formulations. As seen from Table 3 of the reference at the bottom of Col. 8, compositions D, E and F were aqueous solutions or dispersions; however, as seen from Table 4, at Cols. 9-10, application of those compositions in amounts providing 0.3-0.8 osy adhesive yielded improvements in Fuzz ratings, but often at the expense of Scrim bond. Thus, in contrast to the 13.0 and 27.0 Scrim bonds in Smedberg's controls (Examples II and IV, in which no precoat adhesive was used), Scrim bonds in Examples XIII-XIV using precoats D-F, respectively, were only 10.0, 15.5 and 16.0. In contrast, Examples 3-37 and the results thereof reported in Tables 2-10 of Applicants' specification demonstrate that improvements in both Fuzz Rating and Tuft Bind relative to stitch bind-free controls were routinely attained according to the invention, including at application rates in the range providing about ¼ to 1 osy.

To the extent discussion of the problem of fuzzing with carpets made using thermoplastic binders in the background discussion in the subject application stands as prior art, it does not add to Smedberg's express teachings and what would be understood or obvious therefrom to persons skilled in the art in such a way as to make the claims obvious. To the contrary, the problem discussed in the background discussion in the specification exists despite the knowledge of the art. More particularly with regard to knowledge of the art considered relevant for purposes of the instant rejection according to the outstanding action, the fact that extrusion and cross-linking or cross-linkable polymers are known in carpet manufacture by other techniques is not by itself basis for extrapolating or extending those techniques to other systems. Application of such knowledge to Smedberg as in the instant rejection is clearly unwarranted given reference's own disclosure

defying the same or that would require modification in a manner inconsistent with its express teachings and requirements for their application.

In view of the above, it is submitted that Smedberg does not make the subject matter of claims 1-5, 13-19, 21-27, 34, 38, 41 and 44, both because Smedberg is directed to carpet lamination with hot melt adhesives, not with thermoplastic binders and because, taken as a whole, the reference would either lead away from use of the claimed stitch bind composition with its aqueous liquid component or, if read literally with regard to aqueous precoat adhesives formulations, renders Applicants' improvements in both fuzz resistance and tuft bind unexpected.

Claims 6-8 and 20 have been rejected as unpatentable over Smedberg taken with the allegedly admitted prior art and patents to Kato and Bogdany both identified as US 4,836,871. Reconsideration is requested for the reasons discussed below, in which the Bogdany reference already of record in the subject application, US 4,368,282, is assumed to have been the intended citation in the action.

Inapplicability of Smedberg's hot melt adhesive backsize process to the claimed process and the primary reference's failure to make obvious the claimed stitch bind composition with its aqueous liquid component are discussed above and render this rejection inapplicable to claims 6-8 and 20 as well. Moreover, although Kato discloses spraying of aqueous liquid formulations onto a tufted primary backing, and Bogdany discloses application of aqueous liquids as a froth, both of those patents are directed to latex-type backsize adhesives of the type eliminated by Smedberg's hot melt adhesive backsize process. Furthermore, as discussed above, based on Smedberg's examples using precoat adhesives in the form of aqueous solutions or emulsions, unexpected improvements in both fuzz resistance and tuft lock are demonstrated in the examples of the subject application, and nothing in Kato's and Bogdany's teachings regarding application of latex backsizes alters that conclusion.

In view of the above, claims 6-8 and 20 are not obvious from Smedberg taken with the allegedly admitted prior art, Kato and Bogdany.

Claims 9-12, 35-37,39,40, 42, 43 and 45 have been rejected as unpatentable over Smedberg taken with the allegedly admitted prior art and WO 98/38375 (Bieser). Reconsideration is again requested.

This rejection is the same as those discussed above, but with Bieser being cited for its disclosure of various backings and face yarns. The rejection is likewise inapplicable in view of the prior discussion of the primary reference's failure to disclose or make obvious the claimed process using a thermoplastic binder comprising thermoplastic resin or stitch bind composition comprising and aqueous liquid component in conjunction with a thermoplastic binder. Furthermore, combination of the teachings of Smedberg and Bieser is improper because Smedberg is expressly directed to carpet lamination using hot melt backsize adhesives too fluid for extrusion, while Bieser is directed to lamination using specific homogeneously branched linear ethylene polymers applied by extrusion coating onto the back of a primary backing. Bieser also fails to disclose backings with thermoplastic binders affixed thereto or incorporated therein as in claims 36 and 37. While page 44 of Bieser is cited in the outstanding action as disclosing backings with thermoplastic binders needed thereto, the disclosed backings are secondary backings, not backings that are tufted, and in any event the fibers needed thereto are not thermoplastic binders.

Accordingly, none of claims 9-12, 35-37,39,40, 42, 43 and 45 is obvious from Smedberg taken with the allegedly admitted prior art and Bieser.

Claims 1-5, 9-15, 18, 19, 21-27 and 34-45 have been rejected as unpatentable over Bieser in view of Smedberg under 35 USC 103, with Bieser cited as disclosing the claimed process except for the claimed stitch bind viscosities and application rates which the rejection purports to find in Smedberg. Reconsideration is requested.

While Bieser is directed to carpet manufacture in which a thermoplastic binder, in the form of an extruded coating of a specific homogeneously branched linear ethylene polymer, is used, Smedberg discloses carpet manufacture using a hot melt adhesive backsize, as discussed above. Bieser itself distinguishes hot melt lamination processes, specifically noting that their melt strengths are too low for application by extrusion, at page 5 lines 19-28. In view of basic differences in the reference's respective methods of carpet

lamination, substitution of the precoat viscosities and application rates from Smedberg's process into Bieser's disclosure with respect to application of aqueous dispersions is inappropriate. Bieser specifically teaches dispersion viscosities and application rates for his thermoplastic binder process that well exceed those disclosed by Smedberg. Persons skilled in the art clearly would have no motivation to discard those express teachings in favor of the precoat adhesive viscosities and application rates of Smedberg, which are not only entirely outside the ranges disclosed by Bieser, but disclosed by Smedberg in regard to and in conjunction with use of a different form of adhesive and lamination process. Moreover, Smedberg's own examples demonstrating effects of aqueous precoat on scrim bond weigh against application of his teachings to Bieser.

In view of the above, claims 1-5, 9-15, 18, 19, 21-27 and 34-45 are not obvious from Bieser taken with Smedberg.

Finally, claims 16 and 17 have been rejected as unpatentable over Bieser taken with Smedberg and the allegedly admitted prior art under 35 USC 103. Reconsideration is requested.

Lack of motivation to combine Bieser and Smedberg is discussed above and applicable to the instant rejection as well. Furthermore, Bieser specifically notes difficulties of conventional crosslinking or crosslinkable latex binders with regard to both lack of moisture barrier and complicating carpet recycle at page 4 lines 4-9. In the context of such teachings, persons skilled in the art would not be led to use cross-linking or crosslinkable components in the process according to Bieser because such components when crosslinked, as in finished carpets made with the use thereof, tend to absorb water, as discussed at page 2 lines 17-25 of Applicants' specification, and also can impede reprocessing of carpet scrap and spent carpets, as discussed at page 3 lines 20-26 of the specification.


Therefore, claims 16 and 17 are unobvious from Bieser taken with Smedberg and the allegedly admitted prior art.

Conclusion

In view of the amendments made herein and the foregoing reasons for reconsideration of the rejections, it is submitted that the claims of the subject

application are patentable over the cited references and the application is in condition for allowance; accordingly, such action is respectfully requested.

Respectfully submitted,



Stephen L. Hensley
Attorney for Applicants
Registration Number 28,426

Amended Claims (with additions underlined and deletions bracketed)

1. (Twice amended) In a process for manufacture of tufted carpets comprising steps that comprise adhering to a stitched side of a tufted primary backing a plurality of stitches of face yarn comprising a plurality of filaments by applying a thermoplastic binder comprising a softened or melted thermoplastic resin into contact with the stitched side by (a) extruding the binder with melted thermoplastic resin into contact with the stitched side or (b) heating the binder applied or present in solid form in contact with the stitched side to soften or melt the thermoplastic resin, and cooling the thermoplastic binder in contact with the stitched side to solidify the resin, the improvement comprising steps that comprise applying to a plurality of the stitches, before the resin solidifies, a stitch bind composition having a viscosity effective for coating or penetrating the stitches to contact the filaments thereof ranging from [of] about 0.5 to [about] 3000 cps and comprising [a] an aqueous liquid component that boils or vaporizes at a temperature such that it can be removed by heating below a temperature at which the tufted backing is damaged by heat and an organic polymer component that bonds filaments of the stitches on removal of the aqueous liquid component, wherein the stitch bind composition is applied in an amount effective to provide about 0.2 to about 3 ounces of the organic polymer component or a residue thereof per square yard of the stitched side; and, after applying the stitch bind composition but before the resin solidifies, heating the stitch bind composition to substantially remove the aqueous liquid component without damaging the tufted backing.

4. (Twice amended) The process of claim 1 wherein the stitch bind composition has a viscosity of about 1 to [about] 1200 cps.

5. (Amended) The process of claim 1 wherein the [liquid component of the stitch bind composition comprises an aqueous liquid] softened or melted thermoplastic resin applied into contact with the stitched side of the tufted primary backing has flow properties corresponding to an MI of 1 to 200 g/ 10 min.

13. (Twice amended) The process of claim 1 wherein the stitch bind composition has a viscosity of about 1.5 to [about] 400 cps.

24. (Twice amended) In a process for making carpets that comprises steps comprising:

providing a tufted backing comprising a backing and having a pile side and an opposite stitched side, wherein the pile side has a plurality of tufts of face yarn that comprise a plurality of filaments and the stitched side has a plurality of stitches of the face yarn;

contacting the stitched side of the tufted backing with a thermoplastic binder that comprises a thermoplastic resin that softens or melts at a temperature below a temperature at which the tufted backing is damaged by heat or that, when softened or melted, can contact the tufted backing without such damage, wherein the binder is applied into contact with the stitched side by (a) extruding the binder with melted thermoplastic resin into contact with the stitched side or (b) heating the binder applied or present in solid form in contact with the stitched side to soften or melt the thermoplastic resin, without damaging the tufted backing; and

cooling the thermoplastic binder with the softened or melted resin thereof in contact with at least the stitched side of the tufted backing to solidify the thermoplastic resin;

the improvement comprising steps that comprise:

applying to a plurality of stitches, before the softened or melted resin solidifies, a stitch bind composition that has a viscosity effective for coating or penetrating the stitches to contact the filaments thereof ranging from [of] about 0.5 to [about] 3000 cps and comprises [a] an aqueous liquid component that boils or vaporizes at a temperature such that it can be removed by heating below a temperature at which the tufted backing is damaged by heat and an organic polymer component that bonds filaments of the stitches on removal of the aqueous liquid component, wherein the stitch bind composition is applied in an amount effective to provide about 0.2 to about 3 ounces of the organic polymer component or a residue thereof per square yard of the stitched side; and

after applying the stitch bind composition but before the softened or melted resin solidifies, heating the stitch bind composition to remove the aqueous liquid component without damaging the tufted backing.

25. A process for making carpets comprising steps that comprise:
adhering to a stitched side of a tufted backing a plurality of stitches of face yarn comprising a plurality of filaments by cooling in contact with the stitched side a binder comprising a softened or melted thermoplastic resin to solidify the resin, wherein the binder with the thermoplastic resin thereof in softened or melted form is contacted with the stitched side by (a) extruding the binder with melted thermoplastic resin into contact with the stitched side or (b) heating the binder applied or present in solid form in contact with the stitched side to soften or melt the thermoplastic resin;

applying to a plurality of stitches, before the resin solidifies, a stitch bind composition having a viscosity effective for coating or penetrating the stitches to contact the filaments thereof ranging from [of] about 0.5 to [about] 3000 cps and comprising [a] an aqueous liquid component that boils or vaporizes at a temperature such that it can be removed by heating below a temperature at which the tufted backing is damaged by heat and an organic polymer component that bonds filaments of the stitches on removal of the aqueous liquid component, wherein the stitch bind composition is applied in an amount effective to provide about 0.2 to about 3 ounces of the organic polymer component or a residue thereof per square yard of the stitched side; and

heating the stitch bind composition, after application thereof to the stitches and before the resin solidifies, to remove the aqueous liquid component of the stitch bind composition.

26. A process for making a tufted carpet comprising steps that comprise

providing a tufted backing comprising a backing, face yarn comprising a plurality of filaments, and a thermoplastic binder in the form of a coating, fabric or fibers comprising solid thermoplastic resin that softens or melts at a temperature below a temperature at which the backing and face yarn are damaged by heat, wherein face yarn penetrates the backing and forms a pile

surface comprising a plurality of tufts on one side of the backing and a plurality of stitches on an opposite, stitched side of the backing, and the thermoplastic binder is present on at least the stitched side of the backing;

applying to the stitched side of the tufted backing and in contact with a plurality of the stitches a stitch bind composition having a viscosity effective for coating or penetrating the stitches to contact the filaments thereof ranging from [of] about 0.5 to [about] 3000 cps and comprising [a liquid component that boils or vaporizes at a temperature such that it can be removed by heating below a temperature at which the tufted backing is damaged by heat] water and an organic polymer component that bonds filaments of the stitches on removal of the [liquid component] water, wherein the stitch bind composition is applied in an amount effective to provide about 0.2 to about 3 ounces of the organic polymer component or a residue thereof per square yard of the stitched side;

heating the tufted backing in contact with the stitch bind composition to remove the [liquid component] water without damaging the tufted backing;

heating the binder to soften or melt the thermoplastic resin without damaging the tufted backing; and

cooling the binder with the softened or melted resin thereof in contact with the stitched side of the tufted backing to solidify the resin.

27. (Twice amended) A process for manufacturing carpets comprising steps that comprise

providing a tufted primary backing having a pile side comprising face yarn tufts and an opposite side having a plurality of stitches of face yarn;

applying to a plurality of the stitches a stitch bind composition having a viscosity effective for coating or penetrating the stitches to contact the filaments thereof ranging from [of] about 0.5 to [about] 3000 cps and comprising [a] an aqueous liquid component that boils or vaporizes at a temperature such that it can be removed by heating below a temperature at which the tufted backing is damaged by heat and an organic polymer component that bonds filaments of the stitches on removal of the aqueous liquid component, wherein the stitch bind composition is applied in an amount

effective to provide about 0.2 to about 3 ounces of the organic polymer component or a residue thereof per square yard of the stitched side;

contacting the tufted primary backing, an additional backing and a binder comprising a thermoplastic resin that softens or melts at a temperature below a temperature at which the tufted primary backing and the additional backing are damaged by heat or that, when softened or melted, can contact the tufted primary backing and the additional backing without such damage, to form an intermediate structure having binder disposed between the stitched side

of the tufted primary backing and the additional backing;

heating the tufted primary backing or the intermediate structure after application of the stitch bind composition to remove the aqueous liquid component without damaging the tufted primary or additional backing;

heating the binder to soften or melt the thermoplastic resin without damaging the tufted backing or the additional backing; and

cooling the intermediate structure with the thermoplastic resin in softened or melted form to solidify the resin.

38. (Amended) The process of claim 25 wherein the stitch bind composition has a viscosity of about 1.5 to [about] 400 cps.

44. (Amended) The process of claim 43 wherein the viscosity of the stitch bind composition is about 1.5 to [about] 400 cps.